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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,027	02/07/2000	Masahiro Hosoda	900-318	9626

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EXAMINER

FLORES RUIZ, DELMA R

ART UNIT PAPER NUMBER

2828

DATE MAILED: 09/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/499,027

Applicant(s)

HOSODA ET AL.

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10, 11 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10, 11 and 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.



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TECHNOLOGY CENTER 2800

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 10, 16 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Paoli (5,963,568).

Regarding claim 1, Paoli discloses a semiconductor laser device comprising; a first and second of semiconductor laser (see Figs. 1, 3 – 5) resonators having light emitting active layers (see Fig. 1, Characters 18 and 26) of materials different (Column 3, lines 59 – 60 and Column 4, Lines 13 – 14) from each other, the semiconductor laser resonators being provided on the same semiconductor substrate (see Fig. 1, Character 12) so that the light emitting active layers lie substantially in parallel to a main surface of the semiconductor substrate, said first semiconductor laser resonator being located in a

groove (see Fig. 1) including a base and sidewalls, and said second semiconductor laser resonator not being located in said groove; and a high-resistance region (see Fig. 1, Character 34) in a sidewall of said groove which is provided between the semiconductor laser resonators, said high-resistance region having sufficient resistance to electrically isolate the first and second semiconductor laser resonator from one another (Column 7, Lines 48 – 68, Column 8, Lines 1 – 7).

Regarding claims 2, 3, and 17, Paoli discloses a semiconductor laser device, wherein the semiconductor substrate is GaAs substrate (Column 6, lines 55 – 56) and the light emitting layers of the semiconductor laser resonators contain Group V element different from each other and the Group V elements are selected from the group consisting of P, As, Sb and N (Column 10, lines 57 – 65).

Regarding claim 4, Paoli discloses a semiconductor laser resonators comprises two resonators having oscillation wavelength in a red region and infrared region, respectively (Column 5, lines 29 – 42).

Regarding claim 5, Paoli discloses a semiconductor substrate is a GaAs substrate, and the resonator having an oscillation wavelength in a red region includes a light emitting layer formed of an InGaP based material and the resonator having an

oscillation wavelength in an infrared region includes a light emitting layer formed of a GaAs based material (Column 5, lines 29 – 42).

Regarding claim 6, Paoli discloses a light emitting layer of the semiconductor laser resonators lie at substantially the same distance from the main surface of the semiconductor substrate (Figs 1, 3 – 5).

Regarding claims 7 and 10, Paoli discloses a semiconductor laser resonators each have a refractive index wave-guiding structure (said limitation only recites facts and features that are well known and expected, the same features that essentially result from the use or application of a semiconductor laser resonators each have a refractive index wave-guiding structure, and therefore said limitations are said to be inherently disclosed in the teachings of Paoli) and the high-resistivity semiconductor laser is formed by implanting protons or gallium ions (Column 4, lines 30 – 38, Column Line).

Regarding claim 16, Paoli discloses a semiconductor laser device comprising; a first and second of semiconductor laser (see Figs. 1, 3 – 5) resonators provided on the same substrate (see Fig. 1, Character 12), an active layer of the first laser resonator being of different material than an active layer of the second laser resonator (Column 5, lines 29 – 42); the active layer of the second laser resonator being provided in a groove (see Fig. 1) whereas the active layer of the first laser resonator is not provided in a groove (see Fig. 1) and a high-resistance region (see Fig. 1, Character 34) provided at

least along a sidewall of said groove which the active layer of the second laser resonator is provided, the high resistance region comprising ions and or protons implanted into the sidewall of the groove (Column 4, Lines 30 – 38).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli (5,963,568) in view of Doi et al (5,793,790).

Regarding claim 11, Paoli discloses the claimed invention except for an incorporated in a recording and reproducing apparatus capable of performing recording and reproducing for both CD and DVD. It would have been obvious at the time of applicant's invention, to combine Doi of teaching an incorporated in a recording and reproducing apparatus capable of performing recording and reproducing for both CD and DVD with semiconductor laser device because the CD and DVD use to reproducing

and data reading operation. The semiconductor laser device is usually incorporated for use in an optical pick up in a recording and reproducing apparatus capable of performing the recording and reproducing operation.

Claims 18 - 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Paoli (5,963,568) in view of Lang et al (3,999,146).

Regarding claims 18 – 19, Paoli discloses the claimed invention except for semiconductors laser resonator is mounted on a heat sink. It would have been obvious at the time of applicant's invention, to combine Lang of teaching a semiconductor laser resonator is mounted on a heat sink because the heat sink is used for cooling the semiconductor laser element.

Regarding claim 20, Paoli discloses a discloses a semiconductor laser device comprising; a first and second of semiconductor laser (see Figs. 1, 3 – 5) resonators having light emitting active layers (see Fig. 1, Characters 18 and 26) of materials different (Column 3, lines 59 – 60 and Column 4, Lines 13 – 14) from each other, the semiconductor laser resonators being provided on the same semiconductor substrate (see Fig. 1, Character 12) so that the light emitting active layers lie substantially in parallel to a main surface of the semiconductor substrate, an isolating groove defined

between the first and second laser resonators for electrically isolating the first and second semiconductor laser resonator from one another (see Figs. 1, 3 – 5). Paoli discloses the claimed invention except for semiconductor laser resonator is mounted on a heat sink. It would have been obvious at the time of applicant's invention, to combine Lang of teaching a semiconductor laser resonator is mounted on a heat sink because the heat sink is used for cooling the semiconductor laser element.

Response to Arguments

Applicant's arguments filed 6/10/2003 have been fully considered but they are not persuasive. Applicants amendments raised new issues that made necessary the new art to be applied and therefore, the arguments presented against Tanaka et al (5,974,069) are said to be moot due to the new grounds of rejection. Applicant's amendments have been fully addressed by the above presented rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (703) 308-6238. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.



Delma R. Flores Ruiz

Examiner
Art Unit 2828

Drfr

August 25, 2003



Paul Ip
Supervisor Patent Examiner
Art Unit 2828